



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/734,495	12/12/2003	John H. Crume	205017-9012-00	1616

1131 7590 06/20/2005

MICHAEL BEST & FRIEDRICH LLC
401 NORTH MICHIGAN AVENUE
SUITE 1900
CHICAGO, IL 60611-4212

EXAMINER

SY, MARIANO ONG

ART UNIT	PAPER NUMBER
----------	--------------

3683

DATE MAILED: 06/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/734,495

Applicant(s)

CRUME ET AL.

Examiner

Mariano Sy

Art Unit

3683

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 May 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on May 9, 2005 has been received.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 5-7, 13-23, 26, 28, 31-35, and 37-39 are rejected under 35 U.S.C. 102(b) as being anticipated by Lyons (US 6,450,302).

Re-claims 1, 2, 5-7, 13-23, 26, 28, 31-35, and 37-39 Lyons disclosed, as shown in fig. 1-4, a slack adjuster for use with vehicle brakes, the slack adjuster comprising: a body 22 defining a cavity (see fig. 4) and including a lip, the lip defines a top end of the cavity; a link 30 at least partially positioned in the cavity and axially movable within the cavity; and a boot (lies on centerline 114) including a bellows, a first seal integral with the bellows on a first end of the bellows, the first seal engaging the link externally of the cavity for movement with the link, and a second seal integral with the bellows on a second end of the bellows and including a boss, the second seal being positionable within the cavity and engageable with the link within the cavity, the boss being engageable with the lip of the body; wherein the bellows the first and second seals are made of same material and has a consistent hardness throughout.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 4, 8, 9, 11, 12, 24, 25, 27, 29, 36, and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons in view of Sweet et al. (US 4,380,276).

Re-claims 4, 11, 12, and 36 Lyons was silent to show wherein the second seal includes two projections engageable with the link and wipe against a surface of the link when the link moves.

Sweet et al. disclosed a slack adjuster, as shown in fig. 5, a second seal 84 includes two projections engageable with a link 75 and wipe against a surface of the link when the link moves.

Art Unit: 3683

It would have been obvious to one of ordinary skill in the art to have made the second seal of Lyons with two projections engageable with the link, as taught by Sweet et al., in order to guide the link when the link moves within the cavity of the body.

Re-claims 8, 9, 24, 25, 27, 29, and 40 Lyons disclosed, as shown in fig. 1-4, wherein the first seal is movable with the link, and wherein the first seal and the link are movable relative to the second seal.

However Lyons was silent to show wherein the link defines a recess, the seal being including a seal lip that is positionable within the recess to connect the seal to the link.

Sweet et al. disclosed a slack adjuster, as shown in fig. 5, a link 75 defines a recess 87 and a seal 86 being at least partially positionable within the recess.

It would have been obvious to one of ordinary skill in the art to have provided the link of Lyons with a recess and a lip of one end of the seal being at least partially positionable within the recess, as taught by Sweet et al., in order the one end of the bellows is movable in tandem with the link.

7. Claims 3, 10, 30, and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons in view of Berg et al. (US 4,895,226).

Re-claims 3, 10, 30, and 41 Lyons disclosed, as shown in fig. 1-4, wherein the bellows includes three expandable folds.

Berg et al. disclosed a slack adjuster, as shown in fig. 1, a bellows 26 includes five expandable folds.

Art Unit: 3683

It would have been obvious to one of ordinary skill in the art to have modify the bellows of Lyons to five expandable folds, as taught by Berg et al., depending upon the size in order to provide a longer stroke for the link without over stretching the bellows.

8. Applicant's arguments filed on May 9, 2005 have been fully considered but they are not persuasive.

Examiner maintains the rejection is proper.

Applicant argued in the Remarks that "it cannot be determined from figure 4, or elsewhere in the patent, whether the boot has a seal with a boss or if any portion of the boot is inserted into the body of the slack adjuster".

Lyons '302 disclose, as shown in Fig. 1, a slack adjuster 10, a housing or body 22, an outer part link 98, a boot or bellows (between "98" and "100"). In Fig. 4 the housing or body 22 (shown in phantom lines for reference) clearly shows the boot or bellows, covering the outer part link 98, is inserted into the body 22 through a cavity inside the body for link 98 to engage with gear 100. A boss (facing near "100") has an enlarged diameter than the next convolution (smaller in diameter) fitted behind a lip secured within the body (opening hole for the boot or bellows to be inserted into the body 22 in order the boot or bellows will not pull out or separate from the body during movement of outer part link 98 and to seal off dirt, moisture and contaminants.

See attached Fig. 4 below.

Adachi et al. (US 4,754,854) teaches, as shown in fig. 1-3, a boot or bellows 24 having a sealing portion of a large diameter is coupled within an annular groove of body 15c and showing a lip facing one end of the body in order that the bellows will not separate or pull out from the body.

Art Unit: 3683

A boot or bellows having a sealing portion of a large diameter is coupled within an annular groove of body and a lip facing one end of the body in order that the bellows will not separate or pull out from the body and also to seal off dirt, moisture and contaminants. This type of joint and connection between a boot or bellows and a body is old and well known in the art, as disclosed by Yokoi et al. '337 and Adachi et al. '854.

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mariano Sy whose telephone number is 571-272-7126. The examiner can normally be reached on Mon.-Fri. from 8:30 A.M. to 2:30 P.M.

Art Unit: 3683

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bucci, can be reached on 571-272-7099. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

msy M. Sy

June 14, 2005

M. C. Graham
6-16-2005
MATTHEW C. GRAHAM
PRIMARY EXAMINER
GROUP 310